

31. ADDITIONS TO THE FLORISTIC HISTORY OF ORISSA

In spite of intensive and extensive works on the botany of Central India (Haines, 1921-1925; Mooney, 1950), our surveys from 1986-1989 in Sambalpur dist. have yielded new distributional records for Orissa and for India (Panda and Das 1989a, 1989b, 1991, 1992a, 1992b 1993, 1995; Panda *et al.* 1989, 1992a, 1992b; Panda, 1990). New distributional records of a few taxa are given here with their Exsiccatus, flowering and fruiting time, frequency, distribution, ecology and uses.

Alternanthera paronychioides St. Hil., Voy. Bres. 2: 439. 1833; Veldkamp in Blumea 19: 167. 1971 (AMARANTHACEAE).

Exsicc.: Brook's Hill, Sambalpur, 30.xi.1987, *Das et Panda* 864.

Fl. & Fr.: January-December.

Frequency: A common weed of cultivated fields and wastelands across the district.

Distribution: A native of tropical America, now naturalized in various parts of the tropics.

Ecology: The preferred soil is loam and clay, rarely on rocks. Grows in open places in association with *Mecardonia procumbens* (Miller) Small, *Lindernia anagallis* (N. Burm.) Pennell, *Sphaeranthus indicus* L., various grasses and sedges.

Use: Diuretic, used occasionally.

Note: Fairly naturalized in various parts of the dist., being a new member of the flora of Orissa, was not recorded by Haines (*l.c.*) and Mooney (*l.c.*).

Alternanthera pungens H.B.K., Nov. Gen. Sp. 2: 206. 1818; Melville in Kew Bull. 1958: 174. 1958. (AMARANTHACEAE)

Achyranthes repens L., Sp. Pl. 205. 1753.

Alternanthera repens (L.) Link, Enum. Pl. Hort. Berol. 1: 154. 1821, *non* Gmelin 1791; Backer in van Steenis, Fl. Males. 4: 91. 1949.

Exsicc.: Badrama, 25.ix.1987, *Das et Panda* 786.

Fl. & Fr.: January-December.

Frequency: Common, naturalized on wet

wastelands throughout the district.

Distribution: A native of tropical America; now pantropical.

Ecology: A weed of open places in loamy and clay soil, growing in association with *Phyla nodiflora* (L.) Greene, *Mollugo pentaphylla* L., *Phyllanthus virgatus* Forst.f., *Stachytarpheta indica* (L.) Vahl, etc. •

Use: The entire plant is used as a diuretic.

Note: It was not recorded by Haines (*l.c.*) and Mooney (*l.c.*).

Leucas biflora (Vahl) R. Br., Prodr. 504. 1810; Wt., Ic. t. 866. 1844-45; Hook. f. in Hook. f., Fl. Brit. India 4: 683. 1885 (excl. Syn. *L. procumbens* Thw.). (LAMIACEAE)

Phlomis biflora Vahl, Symb. Bot. 3: 77. 1794.

Exsicc.: Ambanala, Badrama, 8.vii.1987, *Das et Panda* 664.

Fl. & Fr.: July-December.

Frequency: Rare, found only at Ambanala.

Distribution: Peninsular India, Sri Lanka.

Ecology: Grows often in dry places in sandy-loamy soil. Associated plants are *Amaranthus viridis* L., *Cassia pumila* Lam., *Crotalaria prostrata* Rottl., *Flemingia chappar* Benth., etc.

Note: So far endemic to Peninsular India and Sri Lanka (Hook. f., *l.c.*), now reported from Sambalpur, making a new record for Orissa and eastern India. Haines (*l.c.*) and Mooney (*l.c.*) have not recorded it.

Nesaea brevipes Koehne, in Engl. Bot. Jahrb. Syst. 3: 326. 1882 & Pfreich. Ht. 17: 226. 1903; Blatter and Hallberg in JBNHS 26: 216; Gamble, Fl. Pres. Madr. 1: 510 (360). 1919; Matthew, Mat. Fl. Tamilnadu Carnatic 218. 1981 & Ill. Fl. Tamilnadu Carnatic t. 281. 1982 (LYTHRACEAE)

Ammannia cordata Wt. & Arn., Prodr. 1: 304. 1834, *non* *Nesaea cordata* Hiern. In Oliver, Fl. trop. Afr. 2: 475. 1871. Clarke in Hook. f., Fl. Brit. India 2: 570. 1879; Prain, Beng.

Pl. 1: 501. 1903.

Exsicc.: Dhankaorah, Sambalpur, 7.xi.1986, *Das et Panda* 440; Bamra, 23.ii.1987, *Das et Panda* 467.

Fl. & Fr.: October-March.

Frequency: Common in the district.

Distribution: Southeast India, Bangladesh, Sri Lanka.

Ecology: A crop-field weed of marshy places in loamy-clayey soil. Associated plants include *Tridax procumbens* L., *Caesulia axillaris* Roxb., *Euphorbia hirta* L., *Evolvulus alsinoides* (L.).

Note: A new record for Orissa. Haines (*l.c.*) and Mooney (*l.c.*) did not record it, but Clarke (*l.c.*) noted it from Noakhali of erstwhile East Bengal, presently Bangladesh, Deccan Peninsula of India and Sri Lanka. Prain (*l.c.*) commented that it is "very rare in East Bengal" occurring as a weed of wetlands. Gamble (*op. cit.*) recorded its distribution in the Circars and Deccan. Matthew (Fl. Tamilnadu Carnatic Pt. I: 610. 1983) corroborated Clarke's records of the world distribution of the species. This report from Sambalpur (Orissa) appears to have filled the gap in its apparently disjunct distribution in southeastern Indian subcontinent i.e. Bengal in the east and Peninsula and Sri Lanka in the south. The species is endemic to the Indian Sub-continent.

Synedrella nodiflora (L.) Gaertn., Fruct. 2: 456. t. 171, f. 7. 1791; Clarke, Comp. Ind. 139. 1876; Hook. f. in Hook. f., Fl. Brit. India 3: 308. 1881; Prain, Beng. Pl. 1: 615. 1903; Gamble, Fl. Pres. Madr. 2(4): 708. 1921 (ASTERACEAE)

Verbesina nodiflora L., Cent. Pl. 1: 28. 1755 et Amoen. Acad. 4: 290. 1759.

Exsicc.: Pradhanpat, 23.i.1989, *Das et Panda* 1328.

Fl. & Fr.: August-January

Frequency: Less common.

Distribution: A native of tropical America; fairly naturalised in the tropics.

Ecology: Prefers cultivated ground in clay soil. Associated plants include *Glinus lotoides*

L., *Hygrophila salicifolia* (Vahl) Nees, *Scoparia dulcis* L., *Bidens pilosa* L.

Uses: Leaf-extract laxative, applied locally in rheumatism. Used as fodder.

Note: Recently introduced in this area. Haines (*l.c.*) and Mooney (*l.c.*) did not record it from Orissa.

Torenia asiatica L., sp. Pl. 619. 1753; Hook. f. in Hook. f., Fl. Brit. India 4: 277. 1885, Yamazaki in Enu. Fl. Pl. Nepal 3: 127, 1982. (SCROPHULARIACEAE)

T. cordata (Griff.) Dutta in Bull. Bot. Soc. Beng. 19:25. 1965.

Treisteria cordata Griff. Notul. 4:190. 1854.

Exsicc.: Hatigirdha, Kholbilung, 4.xi.1986, *Das et Panda* 263.

Fl. & Fr.: May-December

Frequency: Rare, found at Kholbilung and Nrusimhanath.

Distribution: India, Sri Lanka, Myanmar, Java, Nepal, east to China, Malaysia.

Ecology: In open and dense forests from dry to moist places, in loamy-clay to rocky soil. Associated plants are *Hemigraphis hirta* (Vahl) T. Anders., *Barleria cristata* L., *Canscora diffusa* (Vahl) Roem. et Schult.,

Note: A widely distributed species in India from peninsula to northern hills, preferably hilly region. Indian distribution in Peninsula, West Bengal (Darjeeling, Kurseong 940 m) and Assam. This report of the species from Sambalpur is a new addition to the flora of Orissa. Haines (*l.c.*) and Mooney (*l.c.*) did not record it from Orissa. Dutta's (*l.c.*) remark "... seems to be an endemic species" appears to be erroneous as it is widely distributed.

Trichodesma indicum var. *amplexicaule* (Roth) Cooke, Fl. Bombay 2: 215. 1904; Kazmi in J. Arn. Arbor. 52:518. 1971; Banerjee & Pramanik in Bull. Bot. Surv. India 17:113. 1978. (BORAGINACEAE)

T. amplexicaule Roth, Nov. Pl. Sp. 104. 1821; Clarke in Hook. f., Fl. Brit. India 4:153. 1883, pp.

Exsicc.: Pension Para, Sambalpur, 25.viii.1986, *Das et Panda* 157; Kapildhar, Nrusimhanath, 7.iv.1988, *Das et Panda* 1120.

Fl. & Fr.: January-December

Frequency: Common.

Distribution: India, Myanmar, Sri Lanka, Pakistan, Cabul (=Kabul), Baluchistan, Persia, Mauritius.

Ecology: In open, dry or moist places, also in the forests, in lateritic soil and in rock crevices, growing in association with *Laggera aurita* (Willd.) Sch.-Bip., *Hedyotis nitida* Wt. & Arn., *Hemigraphis latebrosa* (Roth) Nees.

Uses: Infusion of leaves and roots used in dysentery. The plant is emollient and diuretic.

Note: Lamina amplexicaule at base. A widely distributed taxon in the plains in India. Haines (*l.c.*) did not make any infraspecific category and noted "probably in all districts" of Bihar and Orissa. Banerjee and Pramanik (*op. cit.*) cited specimens from Bihar, Madhya Pradesh, Rajasthan, Gujarat, Maharashtra, Andhra Pradesh, but none from Orissa. This collection is the first addition of the taxon to the Central National Herbarium (CAL) from Orissa.

Trichodesma indicum var. *subsessilis* Clarke in Hook. f., Fl. Brit. India 4: 153. 1883; Banerjee and Pramanik, *op. cit.* 114. 1978. (BORAGINACEAE)

T. subsessilis Wall., Cat. n. 933. 1828 *Nom. nud.*

Exsicc.: Bamra, 3.xi.1986, *Das et Panda* 217.

Fl. & Fr.: January-December.

Frequency: Common across the district.

Distribution: India, Burma (Myanmar), Pegu.

Ecology: In open, dry or moist land on loamy soil, associated with *Sida cordifolia* Linn., *S. spinosa* L., *Croton bonplandianum* Baill., *Euphorbia hirta* L.

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Note: Lamina base attenuated into a short petiole, never amplexicaule at base. Banerjee and Pramanik (*op. cit.*) reported its distribution in Jammu & Kashmir, Uttar Pradesh, Madhya Pradesh, Bihar and different parts of North India. This report from Sambalpur is a new record for Orissa as well as peninsular India.

Typhonium diversifolium Wall. (*Numer. List*: 300, n. 8933. 1849, *nom. nud.*) ex Schott, Aroid. : 13, t. 20. 1855; Hook.f. in Hook. f., Fl. Brit. India 6 : 510. 1893. (ARACEAE)

Heterostalis diversifolia (Wall. ex. Schott) Schott in Oesterr. Bot. Wochenschr. 7:261. 1857.

Exsicc.: Hirakud, 24.viii.1986, *Das et Panda* 06.

Fl. & Fr.: July-December.

Frequency: Not common, but found throughout the district.

Distribution: India, Nepal, S. Tibet.

Ecology: Grows in semi-open places on moist loamy lateritic soil, in association with *Plesmonium margaritiferum* (Roxb.) Schott, *Lindenbergia indica* (L.) O. Ktze., *Solanum nigrum* L.

Note: Haines (*l.c.*) and Mooney (*l.c.*) are silent on this species in Orissa. It is endemic to the Indo-Nepal region.

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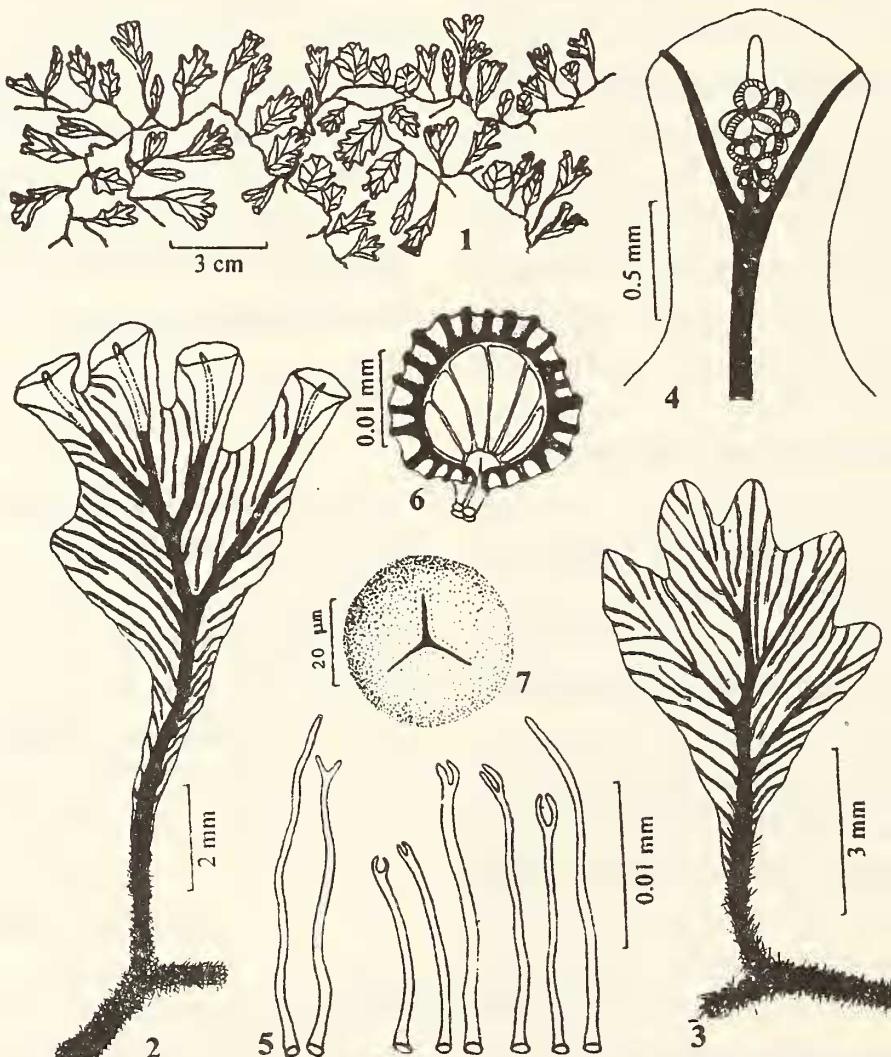
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32. MICROGONIUM SUBLIMBATUM (C. MULL.) v.d.B: HYMENOPHYLLACEAE — A NEW RECORD FOR SOUTH INDIA

(With seven text-figures)



Figs 1-7: *Microgonium sublimbatum*: 1. Habit; 2. Fertile frond enlarged; 3. Sterile frond; 4. A sorus with sporangia; 5. Rhizoids on rhizome; 6. Sporangium; 7. Spore.